## **MILLERBIRD**

## Acrocephalus familiaris

native resident, endemic, endangered Laysan subspecies extinct A.f. familiaris (Laysan) A.f. kingi (Nihoa)

The Millerbird is an endemic resident in the Northwestern Hawaiian Islands (AOU 1998), having likely colonized the archipelago from Asia or other island groups in the Pacific (Bryan 1940; Berger 1972, 1981; E 31:47). Acrocephalus warblers have widely colonized the Pacific Basin (Pratt et al. 1987, Wiles 2005), although Millerbird is genetically distant from other Pacific congeners (AOU 1983, Fleischer et al. 2007). Cassin (1858) followed by Dole (1869, 1879) reported an Acrocephalus warbler (as "Tatare otaiensis") in the marshes of Kaua'i and Hawai'i, which caused Rothschild (1900) and Bryan (1901a) to consider it possibly found on these islands, but Cassin was apparently referring to Acrocephalus caffer (see Tahiti Reed Warbler). No subfossil evidence exists for the occurrence of Acrocephalus in the Southeastern Hawaiian Islands (Olson and Ziegler 1995), which is curious given the genus' widespread distribution within the Pacific Basin (Bryan 1940). Two subspecies of Millerbird have been found, on Laysan and Nihoa, which are distinct and could be treated as different species (Wetmore 1924, Munro 1944, Olson and Ziegler 1995, Olson 1996b, Fleischer et al. 2007; see Synonymies). See Banko (1979) for locations of 104 specimens of Millerbird, and Morin et al. (1997) for a summary of the natural history and biology of the species.

The population of Millerbird on *Laysan* was first reported by H.C. Palmer and G.C. Munro on 16 Jun 1891, forming the basis for Rothschild's (1892a) description of the species. It was reported as common prior to the introduction of rabbits in 1903 (Rothschild 1900; Fisher 1903a, 1903b; Dill and Bryan 1912; Bryan 1915; *E* 3:2-3, 6:66-67), with viable populations remaining until at least 1915 (Dill and Bryan 1912, Munter 1915, Bailey 1956, Ely and Clapp 1973), but had become extinct by May 1923 or shortly thereafter due to severe reduction of vegetation by rabbits (Wetmore in Olson 1996b; see Laysan Rail), "gone with the moths on which it fed" (Munro 1927).

Shortly after confirming the demise of the Laysan population, Wetmore (1924) discovered the *Nihoa* population (cf. HRBP 5915-5918) on 11 June 1923 and named it as a new genus and species, "Conopderas kingi" (Synonymies), after the captain of the Lieutenant Commander of the ship, Samuel Wilder King. It had been missed by earlier naturalists due to Nihoa's difficult landing conditions and by parties that overlooked it while collecting Nihoa Finches (cf. Bryan 1916, 1917). Since discovery, the estimated population size of Millerbirds on Nihoa has varied substantially (E 37:106, Richardson 1954b, Clapp et al. 1977, Conant et al. 1981, USFWS 1984c, Wetmore in Olson 1996b, Conant and Morin 2001, Evenhuis and Eldredge 2001, Rauzon 2001), with estimates from 31 to 731 during 1967-1996 using fixed-transect surveying methodology (Morin et al. 1997, Conant and Morin 2001). The latest estimate was of 814 individuals in 2007 (MacDonald 2008, BLI 2009). Population size appears to be regulated primarily by weather (especially drought, which results in population drop-offs) and its effects on insect availability and nest site availability (Conant 1983c). In the 2000s it was listed as a Federally Endangered species, and translocations of Millerbirds to Laysan (and perhaps Kaho'olawe) from Nihoa were being considered (Morin et al. 1997, Conant and Morin 2001, Fleischer et al. 2007, MacDonald 2008, Lieberman and Kuehler 2009).

Acronyms and Abbreviations Literature cited